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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,757	02/13/2004	Frits Franciscus Carolus Groot	248775US6	5330

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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HAGEMAN, MARK

ART UNIT	PAPER NUMBER
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3653

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/13/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/13/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/777,757

Applicant(s)

GROOT ET AL.

Examiner

Mark Hageman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-13, 16-25 and 28 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 6, 8, 14, 15, 24, 26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-15-2006 has been entered.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

Paragraph 14 lines 2 "doctor" should read motor

Paragraph 55 line 3 reference character "66" should be 36.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 8, 9 and 24 are objected to because of the following informalities:

Claim 8 lines 4 and 5 "caraways" should be camways

Claim 9 line 2 "caraways" should be camways

Claim 24 line 2 "device" should be devices.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 19 recites the broad recitation "at least 6 mm", and the claim also recites "more preferably at least 8 mm," which is the narrower statement of the range/limitation.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 7-11, 16-18, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Abildgaard et al. (U.S. Patent 6,712,194).

Regarding claim 1, Abildgaard et al. teaches a device for sorting products, comprising: a plurality of supporting units adjacently arranged along a conveying path, each supporting unit including a conveying element configured to move along a guide extending according to the conveying path and at least one load carrying platform comprising a supporting surface for supporting a product, a support member supporting the supporting surface, and a tilting mechanism configured to tilt the supporting surface about an axis of tilt parallel to the conveying path with respect to the conveying element, see column 10, lines 23+ and figures 1-5. The tilting mechanism comprises a drive device and at least one cam, 6, configured to be rotated by the drive device about an axis of rotation extending parallel to the axis of tilt when the cam moves over a camway, 2, so as to cause the support member to tilt about the axis of title between a neutral

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position and an extreme position, the axis of rotation is positioned spaced apart from said cam by a distance, see figures 1-5.

Regarding claims 2 and 3, the support member comprises the camway and the camway extends substantially in a radial direction with respect to the axis of tilt, see figure 1. Examiner contends that element 2 is part of the supporting member.

Regarding claims 7-11 the angle of tilt of the support member between the neutral position and the extreme position ranges between 30 and 60 degrees (figure 21 and c15 line 40). The tilting mechanism comprises two cams, see figure 7, which are jointly rotatable about the axis of rotation, during which rotation on one side of the neutral position, one of the cams moves over one of the two camways, and during rotation on the other side of neutral position, the other one of the cams moves over the other one of the two camways. The camways define a V-shape, see figure 20, the V-shape comprises an angle ranging from 30 to 60 degrees. The drive device comprises and electric motor (17 and c13 lines 59+) for each supporting surface.

Regarding claims 16-18, Abildgaard et al. further teaches a supporting surface provided with supporting edges extending perpendicularly to the axis of tilt, see figure 1. The height of the supporting edge decreases from a halfway point of the edge towards the ends thereof. The height of the supporting edges equals zero at the ends thereof, see figure 1.

Regarding claim 24, the reference teaches a sorting device further comprising a control device configured to simultaneously activate the tilting mechanism associated

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with at least two adjacent supporting units during joint support of the product by the respective surfaces, see column 11, lines 5+.

8. Claims 1-3, 7-11 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,874,614 to Heitplatz. Heitplatz discloses a device for sorting products, comprising: a plurality of supporting units adjacently arranged along a conveying path, each supporting unit including a conveying element configured to move along a guide extending according to the conveying path and at least one load carrying platform comprising a supporting surface for supporting a product, a support member supporting the supporting surface, and a tilting mechanism configured to tilt the supporting surface about an axis of tilt parallel to the conveying path with respect to the conveying element (see figure 1 and abstract). The tilting mechanism comprises a drive device (10) and at least one cam (17, 17'), configured to be rotated by the drive device about an axis of rotation (15) extending parallel to the axis of tilt when the cam moves over a camway (18) so as to cause the support member to tilt about the axis of tilt between a neutral position and an extreme position, the axis of rotation is positioned spaced apart from said cam by a distance (figure 3a).

Regarding claims 2 and 3, the support member comprises the camway and the camway extends substantially in a radial direction with respect to the axis of tilt (figure 3a).

Regarding claims 7-11 the angle of tilt of the support member between the neutral position and the extreme position ranges between 30 and 60 degrees (figure 2d

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and c8 lines 1+). The tilting mechanism comprises two cams (17, 17") which are jointly rotatable about the axis of rotation, during which rotation on one side of the neutral position, one of the cams moves over one of the two camways (figure 3a), and during rotation on the other side of neutral position, the other one of the cams moves over the other one of the two camways. The camways define a V-shape (figure 3a) the V-shape comprises an angle ranging from 30 to 60 degrees (portion 18" in figure 3). The drive device comprises and electric motor (10) for each supporting surface.

Regarding claims 16-18, Heitplatz further teaches a supporting surface provided with supporting edges extending perpendicularly to the axis of tilt, see figure 1. The height of the supporting edge decreases from a halfway point of the edge towards the ends thereof. The height of the supporting edges equals zero at the ends thereof, see figure 1.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abildgaard et al. in view of Polling (U. S. Patent No. 6,135,262).

Abildgaard et al. teaches all of the features of the claimed invention except that the load carrying platforms of adjacent supporting units abut against each other. Polling,



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however, does teach this feature. Polling teaches a sorting conveyor wherein the load carrying platforms, 1, abut against each other, see figure 1a, each supporting surface, 3, comprising upper sides of a supporting element and of a bridging element, 4, which overlaps the supporting element at a first end thereof and which is movable in a direction parallel to the supporting surface with respect to the supporting element so as to retain mutual abutment of adjacent load carrying platforms through a curved section. The bridging element is movable in two degrees of freedom with respect to the supporting element, see figures 3 and 6.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention have modified Abildgaard to include the abutting carrying platforms, as taught by Polling, for the purpose of retaining mutual abutment of adjacent load carrying platforms through a curved section.

11. Claims 19-23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abildgaard et al.

Regarding claim 19, Abildgaard et al. discloses the claimed invention except for the height of the supporting edges is at least 6mm, more preferably at least 8mm, at least at a position halfway the length of the supporting edges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the height of the supporting edge to at least 6mm and more preferably 8mm for the purpose of ensuring that the items conveyed on the supporting surface do not slide off the edge during conveyance, since it has been held that discovering an optimum values of a

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result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 20 and 28, Abildgaard et al. discloses the claimed invention except for the radius of the upper sides of the supporting edges is maximally 8mm or maximally 6mm, at least at a position halfway the length of the supporting edges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the radius of the upper sides of the supporting edges to maximally 8mm or maximally 6mm for the purpose of ensuring that the items conveyed on the supporting surface do not slide off the edge during conveyance, since it has been held that discovering an optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 21, Abildgaard et al. discloses the claimed invention except for the spacing between two adjacent supporting edges is between 10mm and 80mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the spacing between two adjacent supporting edges is between 10mm and 80mm for the purpose of ensuring that the adjacent supporting surfaces have enough room to maneuver with respect to each other when the conveyor travels around curves, since it has been held that discovering an optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 22 and 23, Abildgaard et al. discloses the claimed invention except for the length of each supporting surface ranges between 300mm and 500mm or

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500mm and 700mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the length of each supporting surface ranges between 300mm and 500mm or 500mm and 700mm for the purpose of ensuring that the supporting surface are properly sized to fit the majority of items traveling on the sorting conveyor, since it has been held that discovering an optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

12. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heitplatz in view of Polling (U. S. Patent No. 6,135,262).

Heitplatz teaches all of the features of the claimed invention except that the load carrying platforms if adjacent supporting units abut against each other. Polling, however, does teach this feature. Polling teaches a sorting conveyor wherein the load carrying platforms, 1, abut against each other, see figure 1a, each supporting surface, 3, comprising upper sides of a supporting element and of a bridging element, 4, which overlaps the supporting element at a first end thereof and which is movable in a direction parallel to the supporting surface with respect to the supporting element so as to retain mutual abutment of adjacent load carrying platforms through a curved section. The bridging element is movable in two degrees of freedom with respect to the supporting element, see figures 3 and 6.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention have modified Heitplatz to include the abutting carrying platforms,

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as taught by Polling, for the purpose of retaining mutual abutment of adjacent load carrying platforms through a curved section.

13. Claims 19-23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heitplatz

Regarding claim 19, Heitplatz discloses the claimed invention except for the height of the supporting edges is at least 6mm, more preferably at least 8mm, at least at a position halfway the length of the supporting edges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the height of the supporting edge to at least 6mm and more preferably 8mm for the purpose of ensuring that the items conveyed on the supporting surface do not slide off the edge during conveyance, since it has been held that discovering an optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 20 and 28, Heitplatz discloses the claimed invention except for the radius of the upper sides of the supporting edges is maximally 8mm or maximally 6mm, at least at a position halfway the length of the supporting edges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the radius of the upper sides of the supporting edges to maximally 8mm or maximally 6mm for the purpose of ensuring that the items conveyed on the supporting surface do not slide off the edge during conveyance, since it has been held that discovering an

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optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 21, Heitplatz discloses the claimed invention except for the spacing between two adjacent supporting edges is between 10mm and 80mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the spacing between two adjacent supporting edges is between 10mm and 80mm for the purpose of ensuring that the adjacent supporting surfaces have enough room to maneuver with respect to each other when the conveyor travels around curves, since it has been held that discovering an optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 22 and 23, Heitplatz discloses the claimed invention except for the length of each supporting surface ranges between 300mm and 500mm or 500mm and 700mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the length of each supporting surface ranges between 300mm and 500mm or 500mm and 700mm for the purpose of ensuring that the supporting surface are properly sized to fit the majority of items traveling on the sorting conveyor, since it has been held that discovering an optimum values of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Allowable Subject Matter***

14. Claims 4, 5, 6, 14, 15, 26, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4, 5, 26, and 27, the following is a statement of reasons for the indication of allowable subject matter: Abildgaard et al. and Heitplatz are considered to be the most relevant prior art. The references teaches all of the features of the claimed invention except for an angle between the connecting lines between the axis of rotation and the cam and the axis of tilt. Abildgaard et al. teaches that the axis of tilt and the axis of rotation are in line with each other, therefore there is no angle between the axis and the line connected to the cam. Heitplatz shows an angle between the claimed lines but the angle is a maximum of 45 degrees (figure 3a). Furthermore neither reference shows rotating the cam through at least 180 degrees in order to tilt the carrying platform. Heitplatz shows 90 degrees and Abildgaard shows an angle comparable to the angle of tilt, which is maximum 45 degrees.

Regarding claims 14 and 15, the following is a statement of reasons for the indication of allowable subject matter: The combination of Abildgaard et al. or Heitplatz and Polling is considered to be the most relevant prior art. However, neither Abildgaard et al., Heitplatz, nor Polling teach the specific connection means between adjacent supporting units as claimed in claims 14 and 15.

***Response to Arguments***

15. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Hageman whose telephone number is (571) 272-3027. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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